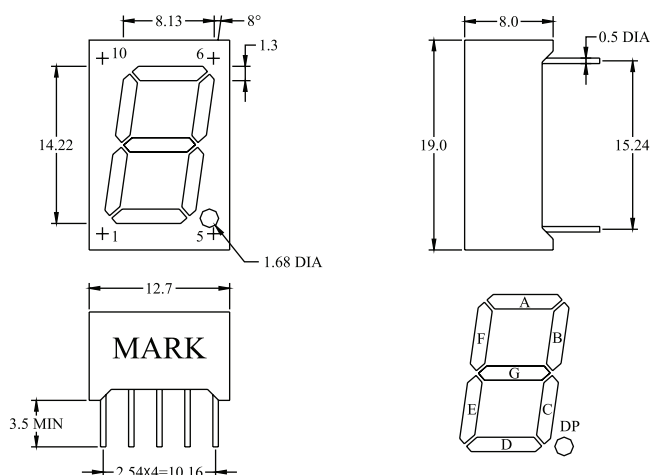


# 0.56" Single Digit Display

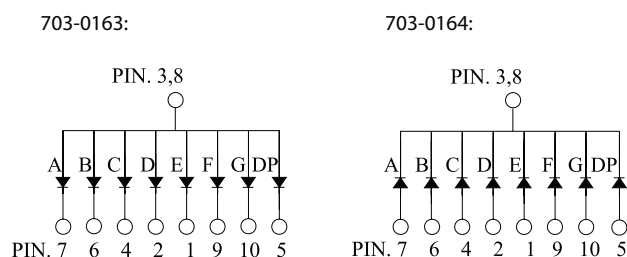


## Package Dimensions:



All dimensions are in mm  
Tolerance:  $\pm 0.25\text{mm}$   
The slope angle of any PIN may be  $\pm 5^\circ$  max

## Internal Circuit Diagram:



## Absolute Maximum Ratings at $T_a=25^\circ\text{C}$

| Parameter                                                     | Symbol     | Rating                                                                                         | Unit             |
|---------------------------------------------------------------|------------|------------------------------------------------------------------------------------------------|------------------|
| Power Dissipation - Pre Segment                               | $P_D$      | 78                                                                                             | mW               |
| Pulse Current (1/10 Duty Cycle, 0.1ms Pulse Width) - Per Chip | $I_{FP}$   | 100                                                                                            | mA               |
| Forward Current - Per Chip                                    | $I_F$      | 30                                                                                             | mA               |
| Reverse (Leakage) Current - Per Chip                          | $I_r$      | 100                                                                                            | $\mu\text{A}$    |
| Reverse Voltage - Per Chip                                    | $V_R$      | 5                                                                                              | V                |
| Operating Temperature Range                                   | $T_{opr.}$ | -25 to +85                                                                                     | $^\circ\text{C}$ |
| Storage Temperature Range                                     | $T_{stg.}$ | -40 to +100                                                                                    | $^\circ\text{C}$ |
| Soldering Temperature                                         | $T_{sol.}$ | Dip Soldering: $260^\circ\text{C}$ for 5sec.<br>Hand Soldering: $350^\circ\text{C}$ for 3 sec. |                  |

# 0.56" Single Digit Display

## Electrical & Optical Characteristics:

| Parameter                                                  | Symbol          | Condition                      | Min. | Typ. | Max. | Unit          |
|------------------------------------------------------------|-----------------|--------------------------------|------|------|------|---------------|
| Luminous Intensity - Per Segment                           | $I_v$           | $I_f=10\text{mA} / \text{seg}$ | 0.72 | 2.9  |      | mcd           |
| Forward Voltage                                            | $V_f$           | $I_f=20\text{mA} / \text{seg}$ |      | 2.1  | 2.6  | V             |
| Peak Wavelength                                            | $\lambda_p$     | $I_f=20\text{mA} / \text{seg}$ |      | 567  |      | nm            |
| Dominant Wavelength                                        | $\lambda_d$     | $I_f=20\text{mA} / \text{seg}$ |      | 572  |      | nm            |
| Reverse Current - Per Chip<br>(Leakage Current - Per Chip) | $I_r$           | $V_r=5\text{V}$                |      |      | 100  | $\mu\text{A}$ |
| Spectrum Line Halfwidth                                    | $\Delta\lambda$ | $I_f=20\text{mA} / \text{seg}$ |      | 30   |      | deg           |
| Response Time                                              | T               |                                |      | 250  |      | nm            |

Note: Customer's special requirements are also welcome.

## Typical Electrical & Optical Characteristics Curves:

(25°C Ambient temperature unless otherwise noted)

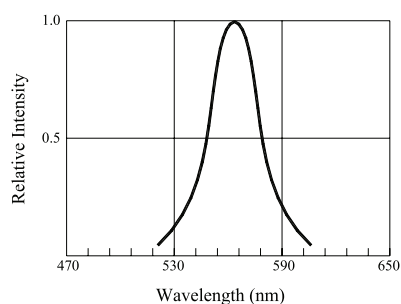


Fig.1 RELATIVE INTENSITY VS. WAVELENGTH

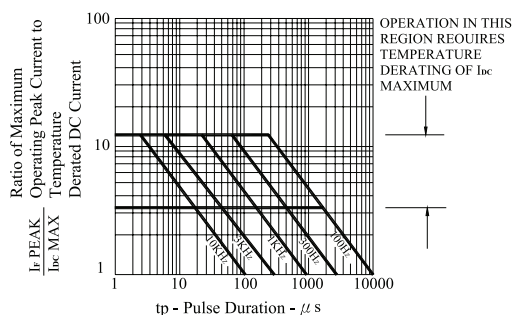


Fig.2 MAXIMUM TOLERABLE PEAK CURRENT VS. PULSE DURATION

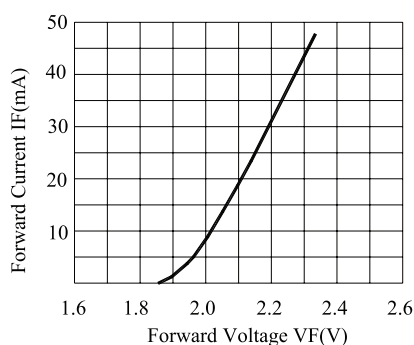


Fig.3 FORWARD CURRENT VS. FORWARD VOLTAGE PER CHIP

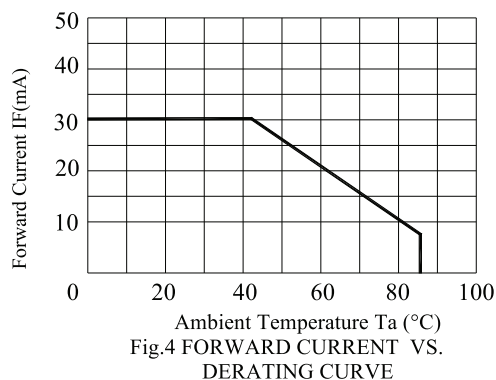


Fig.4 FORWARD CURRENT VS. DERATING CURVE

# 0.56" Single Digit Display

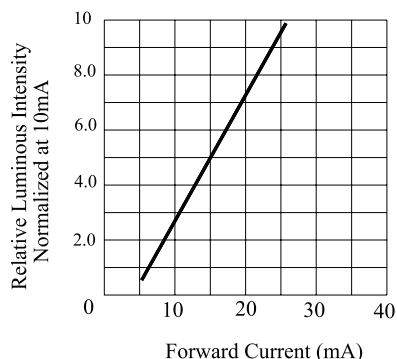


Fig.5 RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

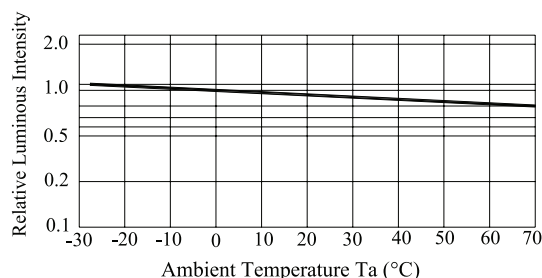


Fig.6 LUMINOUS INTENSITY VS. AMBIENT TEMPERATURE

## Part Number Table

| LED Chip  |                 | Face Colour |          | Part Number |
|-----------|-----------------|-------------|----------|-------------|
| Material  | Emitting Colour | Surface     | Segments |             |
| GaP / GaP | Green           | Grey        | White    | 703-0163    |
| GaP / GaP | Green           | Grey        | White    | 703-0164    |

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